

Having thus, described the invention, what is claimed is:

1. A hydraulic continuously variable transmission, comprising:

a swash plate plunger pump and a swash plate plunger motor connected to each other through a closed hydraulic circuit;

an input gear operatively connected to said swash plate plunger pump and having a rotational center axis;

at least one of said swash plate plunger pump and said swash plate plunger motor comprising a pivotally movable swash plate supported to be movable about a pivot axis extending in a direction substantially perpendicular to the rotational center axis of said input gear;

a swash plate adjustment mechanism for use in pivotally adjusting said pivotally movable swash plate; and

a servo motor operatively attached to said swash plate adjustment mechanism for adjusting a pivot angle of said pivotally movable swash plate, said servo motor having an

output shaft disposed in parallel to the rotational center axis of said input gear;

wherein said servo motor partially overlaps said input gear in side view.

2. The hydraulic continuously variable transmission of claim 1, wherein said servo motor comprises a rotatable drive shaft, and wherein said swash plate adjustment mechanism is connected to said rotatable drive shaft of said servo motor through a spacer shaft which is parallel to the rotational center axis of said input gear, and which is situated proximate an outer circumferential portion of said input gear.

3. The hydraulic continuously variable transmission of claim 2, wherein said spacer shaft is operatively connected to said swash plate adjustment mechanism through an idle gear train.

4. The hydraulic continuously variable transmission of claim 1, wherein said swash plate plunger motor comprises said pivotally movable swash plate, and further comprising a

swash plate support member for supporting said pivotally movable swash plate, and a motor casing for supporting said swash plate support member.

5. The hydraulic continuously variable transmission of claim 4, wherein said motor casing has a concave hemispherical support socket formed therein, and wherein said swash plate support member comprises a motor pivot member supported through sliding contact with said support socket of said motor casing.

6. A hydraulic continuously variable transmission, comprising:

a hollow transmission housing;

a motor casing disposed within said transmission housing for supporting a motor pivot member;

a motor pivot member supported by said motor casing;

a swash plate plunger pump disposed within said housing and comprising a pump swash plate and a pump cylinder;

an input gear operatively connected to said swash plate plunger pump and having a rotational center axis;

a swash plate plunger motor rotatably supported on said motor pivot member and comprising a motor swash plate and a motor cylinder; and

an output shaft extending through and supporting said pump cylinder and said motor cylinder, said output shaft being rotatably supported in said housing through a plurality of rotatable bearings;

a swash plate adjustment mechanism for use in pivotally adjusting said motor swash plate; and

a servo motor operatively attached to said swash plate adjustment mechanism for adjusting a pivot angle of said motor swash plate, said servo motor having an output shaft disposed in parallel to the rotational center axis of said input gear.

7. The hydraulic continuously variable transmission of claim 6, wherein said motor casing has a concave hemispherical support socket formed therein, and wherein said motor

pivot member is supported through sliding contact with said support socket of said motor casing.

8. The hydraulic continuously variable transmission of claim 6, wherein said servo motor comprises a rotatable drive shaft, and wherein said swash plate adjustment mechanism is connected to said rotatable drive shaft of said servo motor through a spacer shaft which is parallel to the rotational center axis of said input gear, and which is situated proximate an outer circumferential portion of said input gear.

9. The hydraulic continuously variable transmission of claim 6, wherein said spacer shaft is operatively connected to said swash plate adjustment mechanism via an idle gear train.

10. The hydraulic continuously variable transmission of claim 6, wherein the swash plate adjustment mechanism comprises a threaded shaft which is substantially parallel to said transmission output shaft.